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ALLEGHENY FOREST EXPERIMENT STATION*

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SEED FALL OF ATLANTIC WHITE-CEDAR 2.571

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Atlantic white-cedar (*Chamaecyparis thyoides*), which occurs in many swamps of the Pine Barren region of southern New Jersey, forms mature stands worth \$300 or more per acre. How to maintain this valuable type where it now occurs and how to favor its spread to swamps now occupied by red maple, black tupelo, and gum, and other low value species, are questions of major importance to the forest economy of the region. As the first step in attacking this problem, a study was made over a two-year period on white cedar seed fall.

Seed dispersal began about October 15 and continued during each month of the year, but 39% of the seed crop fell by November 15 and over 60% by December 15.

Percent of Seed Fall by Months

Year	Oct*	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct**	TOTAL
1937-38	22	28	17	17	10	1.5	0.5	0.7	0.7	0.8	0.5	0.7	0.6	100.0
1938-39	10	41	25	10	6.8	2.4	2.2	1.0	0.7	0.2	0.3	0.2	0.2	100.0

* From the beginning of dispersal of new seed to end of month.
** From October 1 to beginning of dispersal of new seed.

The peak of seed fall in 1937 occurred between October 23 and November 2, and in 1938 between November 2 and 12. Attempts to correlate seed fall with temperature or relative humidity were unsuccessful. In fact, in contrast to pine that sheds seed only on fair days, white-cedar seeds fell, though at a reduced rate, during rainy weather. High winds increased the quantity of seed that fell.

Mature white-cedar stands released 8 million seeds per acre in 1937 and 9 million in 1938. This abundance of seed augurs well for the maintenance and extension of the type wherever seed bed and growth conditions are favorable.

* In cooperation with the University of Pennsylvania.